

# 2020 Annual Site Inspection

---

Defense Depot Memphis, Tennessee  
U.S. EPA I.D. Number TN4210020570

Revision 1  
June 2021



**Defense Depot Memphis, Tennessee**  
**Main Installation**  
**2020 Annual Site Inspection Report**

Pursuant to the Land Use Controls Implementation Plan (LUCIP) dated February 2004 (Appendix C of Rev. 1 Final Main Installation Remedial Design dated July 2004) for the former Defense Depot Memphis, Tennessee (DDMT) - Main Installation (MI), a visual inspection of the MI was conducted by HDR, Inc., on 6 July 2020.

The MI contains approximately 567 acres with open storage areas, warehouses, former military family housing, and outdoor recreational areas. All of the MI property has been transferred for reuse through public benefit and economic development conveyances.

The majority of the MI is zoned for light industrial use. Residential reuse is allowed at the former family housing area and the former administration building area (Parcels 1 and 2 in Functional Unit [FU] 6). Per the deed from the Department of Interior to the City of Memphis for the golf course area, only recreational reuse is allowed at the golf course area (FU2). [Table 1](#) Summary of Land Use Controls and Monitoring Requirements, [Figure 1](#) Land Use Restrictions Map and [Figure 2](#) Groundwater Use Restrictions from the MI LUCIP are attached.

**A summary of the land use restrictions is as follows:**

- No residential land use or other child-occupied facilities including daycare on the MI (except Parcels 1 and 2 of FU6).
- No production/consumptive use of groundwater or drilling groundwater wells on the MI.
- Notice of Land Use Restrictions (NLUR) filed with Shelby County Register of Deeds (SCROD). Leases and deeds for MI property must include the Land Use Controls (LUC) and Environmental Protection Provisions (EPP).

**Verification that land use restrictions are being accomplished and LUCs remain effective**

- Verify that boundary fence surrounding golf course area in FU2 remains intact.
  - Visual inspection conducted on 6 July 2020. No deficiencies or required repairs were identified.
  - Interviewed Mr. Leonard Perkins, President of Vietnam Veterans Association Chapter 1113 (VVA), on 13 July 2020. VVA obtained the lease for the golf course from the City of Memphis and took over operations in January 2020. Mr. Perkins confirmed that VVA was responsible for maintaining the fence around the golf course. VVA performs grounds maintenance regularly throughout the year and checks the fence for damage. No damage to the fence has been observed since VVA assumed responsibility for the golf course. When fence damage is identified, VVA will work quickly to have it fixed.
- Verify that no residential housing/development or child daycare activities are occurring at the site (except Parcels 1 and 2 of FU6).
  - Visual inspection conducted on 6 July 2020. No deficiencies identified.
  - On 13 July 2020, conducted an on-line search of the Shelby County Office of Planning and Development Land Use Controls Section website (<http://shelbycountyttn.gov/924/Zoning-Subdivision>) and the zoning atlas (<http://mapgis.memphistn.gov/Applications/DPDGov>). The search confirmed that the MI

is zoned Industrial District – EMP for Employment as per the Memphis and Shelby County Unified Development Code – The Zoning Code and Development Regulations for the City of Memphis and Unincorporated Shelby County approved by the Shelby County Board of Commissioners as Ordinance No. 397 on August 9, 2010, and the Memphis City Council as Ordinance No. 5367 on August 10, 2010 and as amended on October 18, 2016. There are two exceptions: Parcels 1 and 2 in FU 6 which are zoned Residential, and the golf course area in FU2, which is zoned Recreational.

- Interviewed the following property owners/managers: Ms. Anita Bunn of Colliers International – the property management firm for the Memphis Depot Industrial Park (6 July 2020); Mr. Greg Ward of Barnhart Crane (6 July 2020); Mr. Robert Keskey, President of Supply Chain Solutions LLC (15 July 2020); and Mr. Randy Richardson, Executive Director of Port of Memphis and Vice President of Port and Industrial Property for the Memphis/Shelby County Economic Development Growth Engine (13 July 2020). All confirmed that no residential housing/developments or child daycare activities occur at their property on the site.

Ms. Bunn was unaware of any tenants conducting summer youth work programs in 2020.

Mr. Greg Ward noted that Barnhart Crane's Memphis Depot Industrial Park location did not participate in the Landmark Youth Training program in 2020 and that the garden on the Barnhart Crane property has been inactive since June 2018.

Mr. Leonard Perkins noted that VVA hosted after school and summer youth golf programs for children aged 7 to 18 from February 2020 until early July 2020. Approximately 10 children attended the programs for two to four hours two days per week.

The land use restrictions apply to all the MI, except the area available for unrestricted use along the eastern boundary. The groundwater use restrictions, which are enforced by Shelby County Health Department, apply to all the MI and the surrounding area within one-half mile. The restrictions apply to all of the property held by the interviewees' companies, except that Barnhart Crane also owns the administrative building and property within the unrestricted use area. The area subject to the restrictions is clearly understood by the property owners.

- Obtained current tenant list from Colliers International on 6 July 2020. No residential housing/development or child daycare activities are listed at the Memphis Depot Industrial Park.
- Conducted a visual inspection of Alpha Omega Veterans Services (AO) garden on 6 July 2020. As noted in the 2019 Annual Site Inspection Report, AO maintains a garden of less than one (1) acre on the south end of the AO property. The garden program provides classes to AO clients and residents (all adults) on organic gardening and nutritional cooking. The residents maintain the garden with assistance from local master gardeners as part of the AO rehabilitation program. The visual inspection confirmed that the garden is within the AO property; the AO property is within the area available for Unrestricted Use ([Figure 1](#)).
- Verify that no groundwater wells have been installed at the site (except for monitoring and injection wells that were installed as part of the remedy) and that no production/consumptive use of groundwater is occurring.
  - Visual inspection conducted on 6 July 2020. No deficiencies identified.

- Interviewed Mr. Mark Thomas, Memphis/Shelby County Health Department Pollution Control Division, Water Quality Branch on 7 July 2020. Mr. Thomas confirmed that no permits have been issued for construction of consumptive use/production groundwater wells at the MI.  
  
He also confirmed that the groundwater well construction permit process remains the same. His office must review and approve all groundwater well construction permits.
- Interviewed the following property owners/managers: Ms. Anita Bunn of Colliers International – the property management firm for the Memphis Depot Industrial Park (6 July 2020); Mr. Greg Ward of Barnhart Crane (6 July 2020); Mr. Robert Keskey, President of Supply Chain Solutions LLC (15 July 2020); Mr. Leonard Perkins, President of VVA 1113 and golf course Manager (13 July 2020), and Mr. Randy Richardson, Executive Director of Port of Memphis and Vice President of Port and Industrial Property for the Memphis/Shelby County Economic Development Growth Engine (13 July 2020). All confirmed no groundwater extraction wells have been installed at their property on the site and no production/consumptive use of groundwater is occurring.
- Verify that the NLUR is filed with the SCROD and that leases and deeds for property on the MI include the LUC and EPP.
  - On 13 July 2020, searched SCROD website (<http://register.shelby.tn.us>) and confirmed the NLUR for the MI, Instrument 050144108, was recorded on 26 January 2005.
  - On 13 July 2020, conducted a search of SCROD website (<http://register.shelby.tn.us>) to view and confirm that MI deeds include Land Use Controls and Environmental Protection Provisions. The following Instruments are on file:
    - Deed from Army to Depot Redevelopment Corporation of Memphis and Shelby County (DRC) – Instrument 02097802 recorded June 12, 2002, includes the EPP but not the LUC
    - Deed from Army to DRC – Instrument 06080130 recorded May 19, 2006, specifically states the LUC/EPP
    - Deed from Army to DRC – Instrument 11036907 recorded April 13, 2011, specifically states the LUC/EPP
    - Deed from Army to City of Memphis (COM)/Police Department – Instrument 02065495 recorded April 15, 2002, specifically includes the CERCLA notice but not the LUC/EPP
    - Deed from Department of Interior to COM Golf Course – Instrument 06086149 re-recorded as Instrument 06168071 recorded October 12, 2006, includes the EPP but not the LUC
    - Deed from DRC to Memphis Depot Association/Mayfield Properties LP – Instrument 11076360 recorded August 5, 2011, references Instruments 050144108 and 11036907 as Permitted Encumbrances
    - Deed from DRC to Barnhart Crane – Instrument 10016009 recorded February 18, 2010, references Instruments 050144108 and 11036907 under Permitted Encumbrances
    - Deed from DRC to Barnhart Crane – Instrument 11056745 recorded June 10, 2011, references Instruments 050144108 and 11036907 under Permitted Encumbrances

- Deed from Varma to Barnhart Crane – Instrument 13079834 recorded July 2, 2013, references Instruments 05014108 and 11036907 under Permitted Encumbrances
- Deed from DRC to Supply Chain Solutions – Instrument 17004420 recorded January 13, 2017, references Instruments 05014108 and 11036907 under Permitted Encumbrances
- On 13 July 2020, a search of the SCROD website for leases/deeds from Barnhart Crane to 1701 Dunn Road LLC identified a quit claim deed Instrument 14054556 and a lease Instrument 14054557, both recorded 28 March 2014. Neither includes the LUC/EPP. The lease references the quit claim deed that references the deed from DRC to Barnhart Crane Instrument 11056745 that references Instrument 05014108 and 11036907 under Permitted Encumbrances.
- On 13 July 2020, a search of the SCROD website for leases/deeds from Barnhart Crane to 2163 Airways Blvd LLC, identified a quit claim deed Instrument 14054552 and a lease Instrument 14054553, both recorded 28 March 2014. Neither includes the LUC/EPP. The lease references the quit claim deed that references the deed from the Department of Army to the DRC Instrument 02097802 that includes the EPP but not the LUC.
- On 13 July 2020, a search of the SCROD website for leases/deeds from Mayfield Properties to Memphis Depot TIC LLC/DP 107 LLC identified a quit claim deed Instrument 18038535, which references Instruments 05014108 and 11036907 under Permitted Encumbrances.
- Interviewed the following property owners/managers: Ms. Anita Bunn of Colliers International – the property management firm for the Memphis Depot Industrial Park (16 July 2019); Mr. Greg Ward of Barnhart Crane (16 July 2019); Mr. Robert Keskey, President of Supply Chain Solutions LLC (24 July 2019); and Mr. Randy Richardson, Executive Director of Port of Memphis and Vice President of Port and Industrial Property for the Memphis/Shelby County Economic Development Growth Engine (16 July 2019). Barnhart Crane, Supply Chain Solutions LLC and Memphis/Shelby County Economic Development Growth Engine representatives stated no deeds or leases have been issued since the 2019 inspection. Ms. Bunn of Colliers International stated leases issued since the 2019 inspection reference the LUC and EPP.

**Description of any deficiency or violation of the land use restrictions**

Found that leases entered into prior to July 2018 do not consistently include the LUC/EPP but generally reference a deed that references a prior deed that references the NLUR and the DA to DRC deed that specifically states the LUC/EPP. Property owners and managers state that new leases reference the LUC/EPP.

No further deficiencies or violations identified.

**Description of any proposed measures or corrective actions taken to remedy the deficiency or violation**

No proposed measures or corrective actions are necessary.

**Certification Statement**

*I, the undersigned, do document that the inspection was performed as indicated above, and that the above information is true and correct to the best of my knowledge, information, and belief.*

Date: 30 June 2021  
Name/Title: Thomas Holmes/Project Manager  
Organization: HDR Inc.  
Signature:

Completed annual inspection forms shall be sent within thirty (30) days of the inspection to:

HQ Department of the Army  
Assistant Chief of Staff for Installation Management  
Attn: BRAC Division (DAIM-ODB) (James C. Foster, PM)  
2530 Crystal Drive (Taylor Bldg), Room 5000  
Arlington, VA 22202-3940

U. S. Environmental Protection Agency, Region 4  
David Keefer, Chief  
Restoration & Sustainability Branch, Superfund Division  
61 Forsyth Street, SW  
Atlanta, GA 30303

Tennessee Department of Environment and Conservation  
Division of Remediation  
Memphis Field Office  
Attn: Jordan English  
8383 Wolf Lake Drive  
Bartlett, TN 38133-4199

**Table 1**

**Summary of Land Use Controls and Monitoring Requirements  
From Main Installation Land Use Control Implementation Plan**

TABLE 1  
SUMMARY OF LAND USE CONTROLS AND MONITORING REQUIREMENTS  
ANNUAL SITE INSPECTION REPORT  
Main Installation - Defense Depot Memphis, Tennessee

Type of control	Purposes of control	Duration	Implementation	Monitoring frequency/responsibility <sup>1</sup>	Affected area
1. Lease Restrictions A. Land Use B. Groundwater	A. Prevent residential use or daycare activities on property. B. Prevent production/ consumptive use of groundwater or drilling of groundwater wells.	The term of the Master Lease ending on August 31, 2052, or the term specified in any sublease.	Master Lease entered into by the Army and the DRC includes EPP.  DRC subleases are required to include Master Lease EPP that restrict land use and groundwater use.	Site Inspection – Annual. The Army will verify adherence to the LUC.  LUC verification – Every 5 years as part of the required remedy review under CERCLA. The Army will verify with the DRC that all subleases contain required EPP.	All of the MI property, except Parcels 1 and 2 in FU6.
2. Deed Restrictions A. Land Use B. Groundwater	A. Prevent residential use or daycare activities on property. B. Prevent production/ consumptive use of groundwater or drilling of groundwater wells.	Until the concentration of hazardous substances in the soil and the groundwater have been reduced to levels that allow for unlimited exposure and unrestricted use.	Drafted by Army property disposal agent in accordance with Tennessee law and recorded at the Shelby County Register of Deeds office.	Site Inspection – Annual. The Army will verify adherence to the LUC.  LUC verification – Every 5 years as part of the required remedy review under CERCLA. The Army will verify information properly recorded at Shelby County Register of Deeds office(s).	All of the MI property except Parcels 1 and 2 in FU6.
3. Notice of Land Use Restriction A. Land Use B. Groundwater	A. Prevent residential use or daycare activities on property. B. Prevent production/ consumptive uses of groundwater or drilling of groundwater wells.	Until the concentration of hazardous substances in the soil and the groundwater have been reduced to levels that allow for unlimited exposure and unrestricted use.	Drafted by Army property disposal agent in accordance with Tennessee law and recorded at the Shelby County Register of Deeds office.	Site Inspection – Annual. The Army will verify adherence to the LUC.  LUC verification – Every 5 years as part of the required remedy review under CERCLA. The Army will verify information properly recorded at Shelby County Register of Deeds office(s).	All of the MI property except Parcels 1 and 2 in FU6.
4. Zoning Restrictions	Allow only certain uses of the property per designation as a Light Industrial zoning district.	Until zoning district designation changes.	Zoning districts designated by City of Memphis and Shelby County LUC Board.	Site Inspection – Annual. The Army will verify adherence to the LUC.  LUC verification – Every 5 years as part of the required remedy review under CERCLA. The Army will verify with the City of Memphis and Shelby County the current zoning designation.	All of the MI property.



TABLE 1  
SUMMARY OF LAND USE CONTROLS AND MONITORING REQUIREMENTS  
ANNUAL SITE INSPECTION REPORT  
Main Installation - Defense Depot Memphis, Tennessee

Type of control	Purposes of control	Duration	Implementation	Monitoring frequency/responsibility <sup>1</sup>	Affected area
5. Groundwater Well Restrictions	Prohibit installation of drinking water well within half-mile of the site and the off-site contaminated groundwater.	Until the site is no longer a Federal Superfund site, or MSCHD determines that the drilling of a well does not pose a threat to a local aquifer.	Groundwater Well Construction Code administered by MSCHD, Water Quality Branch.	Site Inspection – Annual. The Army will verify adherence to the LUC.  LUC verification -- Every 5 years as part of the required remedy review under CERCLA. The Army will verify with the MSCHD on the implementation of its regulation.	All of the MI property except Parcels 1 and 2 in FU6.
6. Fence	Restrict public access to prevent unauthorized uses.	Until the concentration of hazardous substances in the soil and the groundwater have been reduced to levels that allow for unlimited exposure and unrestricted use.	Erected by the Army and maintained by the City of Memphis.	Site Inspection – Annual. The Army will verify adherence to the LUC.  LUC verification -- Every 5 years as part of the required remedy review under CERCLA.	The golf course area located in FU2.

**Notes**

<sup>1</sup> Prior to transfer of any Depot property, the Army (or its representatives) will perform the monitoring. After transfer, the Army may arrange to have TDEC, the City of Memphis, or some independent third party representative conduct any required monitoring. [See Section 5 below].

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

DRC = Depot Redevelopment Corporation of Memphis and Shelby County

EPP = Environmental Protection Provision

FU = Functional Unit

LUC = Land Use Control

MI = Main Installation [of the Memphis Depot]

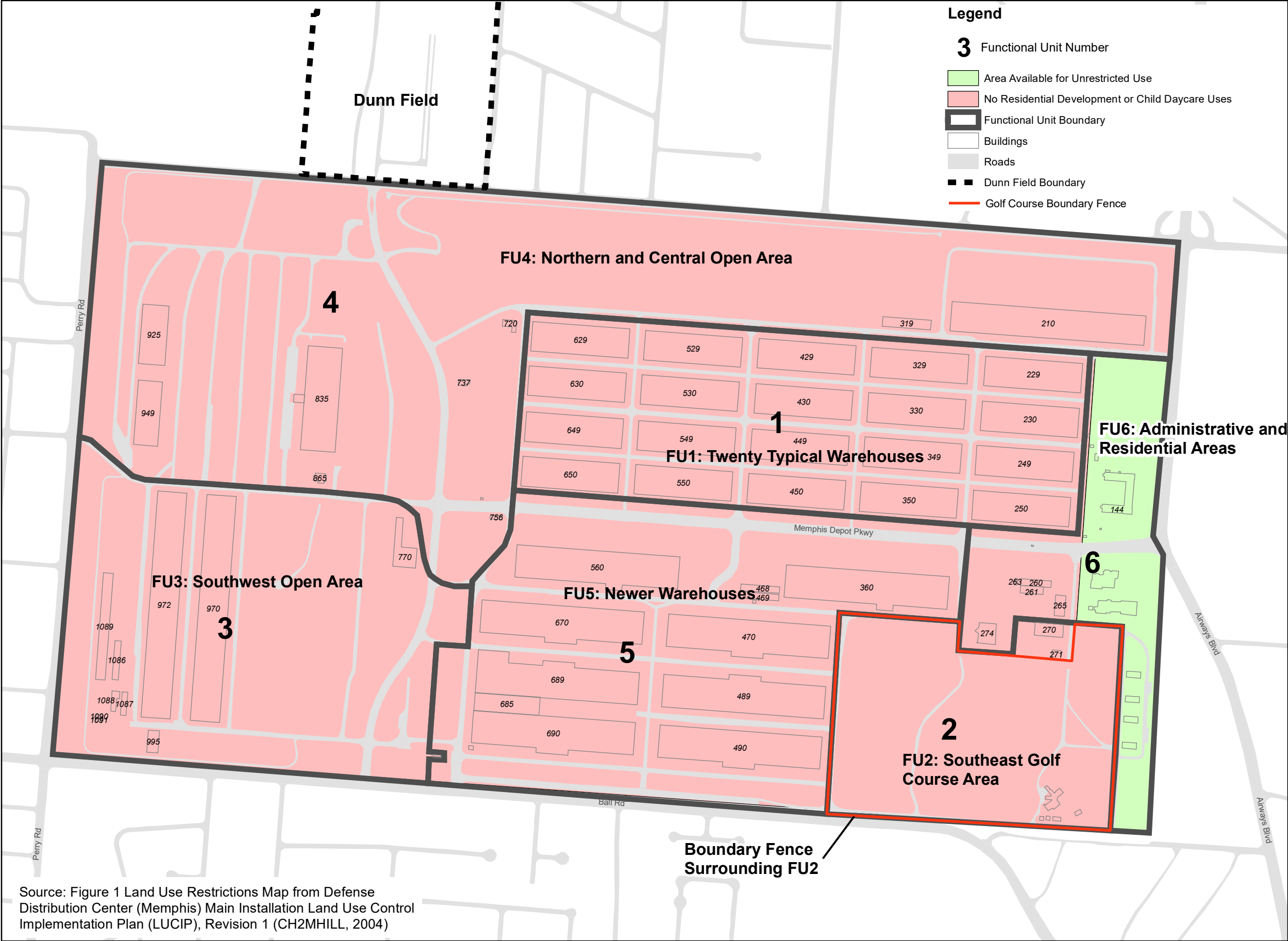
MSCHD = Memphis Shelby County Division of Health Services

TDEC = Tennessee Department of Environment and Conservation

**Source:** *Defense Distribution Center (Memphis) Main Installation Land Use Control Implementation Plan* (LUCIP). CH2MHILL, 2004.

**Figures 1 and 2**

**Land Use and Groundwater Use Restrictions  
From Main Installation Land Use Control Implementation Plan**



**Figure 1**

**Land Use Restrictions Map**

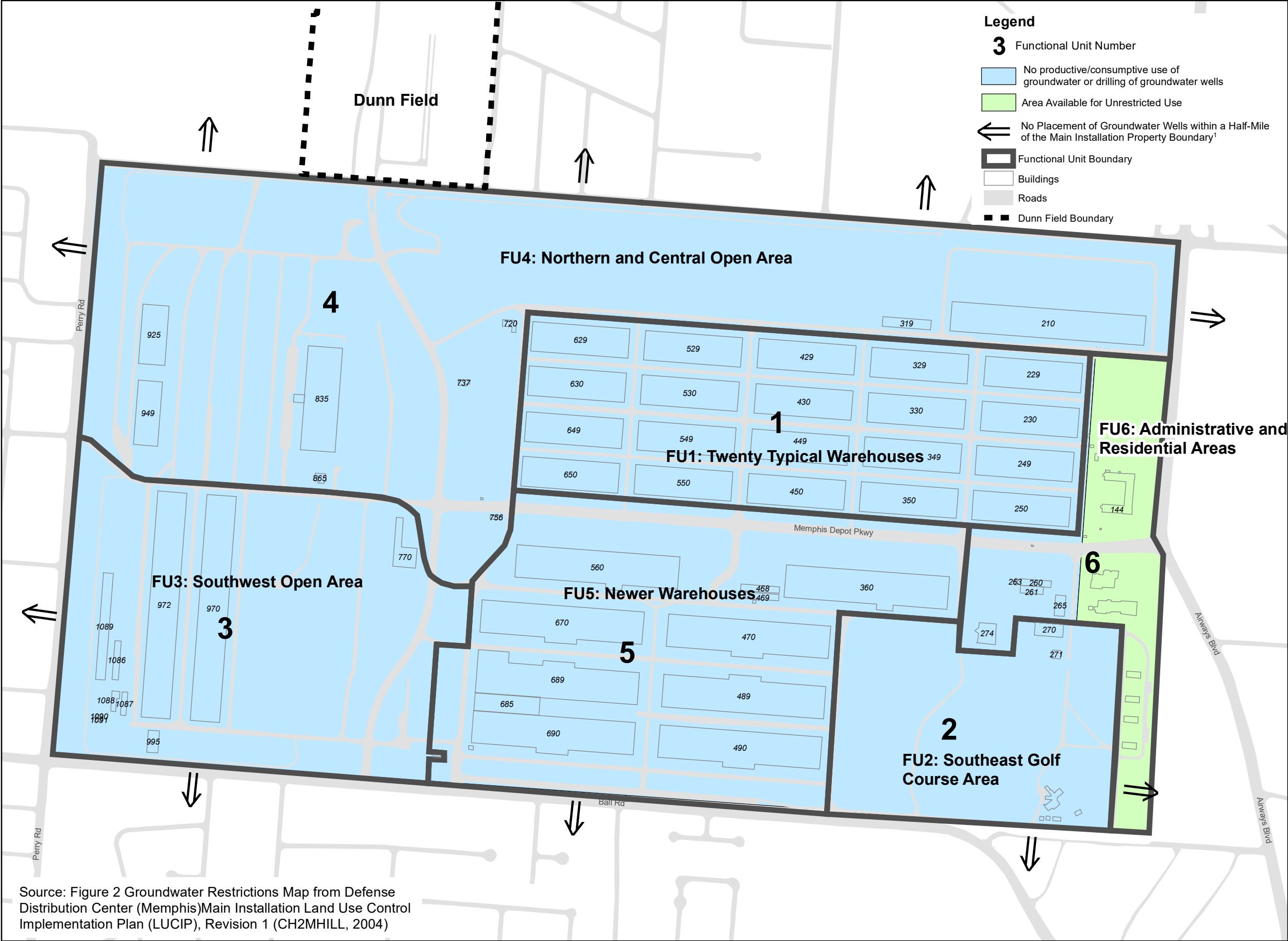
Annual Site Inspection Report

Main Installation  
Defense Depot  
Memphis, Tennessee

0 500 1,000  
Feet

Projection: NAD 1927 StatePlane Tennessee  
Units: Feet, Elevation Units: Feet, NAVD88

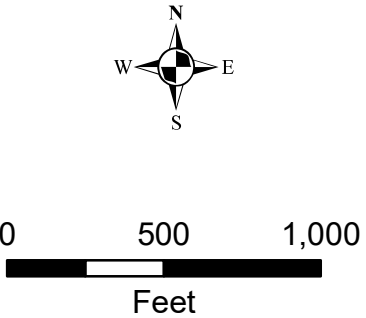
Date: 8/12/2020  
Edition: Rev 0



Source: Figure 2 Groundwater Restrictions Map from Defense Distribution Center (Memphis) Main Installation Land Use Control Implementation Plan (LUCIP), Revision 1 (CH2MHILL, 2004)

**Figure 2**  
**Groundwater Restrictions Map**  
  
Annual Site Inspection Report  
  
Main Installation  
Defense Depot  
Memphis, Tennessee

Note:  
1. Per Shelby County  
*Rules and Regulations  
of Wells.*



Projection: NAD 1927 StatePlane Tennessee  
Units: Feet, Elevation Units: Feet, NAVD88

Date: 8/12/2020  
Edition: Rev 0



**Defense Depot Memphis, Tennessee**  
**Dunn Field**  
**2020 Annual Site Inspection Report**

Pursuant to the Land Use Controls Implementation Plan (LUCIP) dated September 2008 (Appendix A of Rev. 1 Final Dunn Field Off-Depot Groundwater Remedial Design dated September 2008) for the former Defense Depot Memphis, Tennessee – Dunn Field (Memphis Depot), a visual inspection of property was conducted by HDR, Inc., on 6 July 2020.

Dunn Field is located across Dunn Avenue from the northwest quadrant of the Main Installation and covers 67 acres. The eastern portion of Dunn Field was historically used for storage of bauxite and fluorspar and was designated available for unrestricted use; this property was transferred for reuse in 2007; 39.35 acres were transferred to Dunn Field Business Park, LLC via competitive public sale and 1.6 acres were transferred to the City of Memphis via public benefit conveyance. The remaining 26.2 acres on the western side were used for bauxite storage and waste disposal; this area is still held by Army.

Dunn Field is undeveloped except for access roads, other paved areas and fencing. The only structure on Dunn Field is the former soil vapor extraction system equipment building in the western area. The LUCs apply only to the western area that is currently held by Army and approved for future transfer. [Table 1](#) Summary of Land Use Controls and Monitoring Requirements, [Figure 1](#) Land Use Restrictions and [Figure 2](#) Groundwater Use Restrictions from the Dunn Field LUCIP are attached.

The Dunn Field LUC protocol requiring denial of groundwater use or installation of groundwater wells within the sites is being enforced.

**A summary of the land use restrictions is as follows:**

- No residential land use or other child-occupied facilities including daycare in the Disposal Area/western portion of Dunn Field.
- No production/consumptive use of groundwater or drilling groundwater wells in contaminated groundwater associated with Dunn Field.

**Verification that land use restrictions are being accomplished and LUCs remain effective**

- Verify that no residential housing/development or child daycare activities are occurring in the Disposal Area/western portion of Dunn Field.
  - Visual inspection conducted on 6 July 2020. No structures or other development are present on the portion of Dunn Field subject to land use restrictions, except for the soil vapor extraction (SVE) equipment building installed for site remediation. SVE operations were halted in 2012 after remediation goals for Dunn Field were achieved. The building is used to store the SVE equipment for future use, if necessary.
  - Access to Dunn Field is controlled by perimeter fence with locked gates. Visual inspection conducted on 6 July 2020 confirmed the fence was in good condition and that unauthorized use of the property was not observed. The fence adequately prevents unauthorized entry.
- Verify that no groundwater wells have been installed at the site (except for wells that were installed as part of the remedy) and that no production/consumptive use of groundwater is occurring.

- Visual inspection conducted on 6 July 2020. No deficiencies identified.
- Interviewed Mr. Mark Thomas, Memphis/Shelby County Health Department Pollution Control Division, Water Quality Control on 7 July 2020. Mr. Thomas confirmed that no permits have been issued for construction of consumptive use/production groundwater wells at Dunn Field or within contaminated groundwater down gradient of Dunn Field.

**Description of any deficiency or violation of the land use restrictions**

No deficiencies or violations identified.

**Description of any proposed measures or corrective actions taken to remedy the deficiency or violation**

No proposed measures or corrective actions are necessary.

**Description of whether the use restrictions and controls referenced in Column 1 of Table 1 were communicated in the deed(s)**

No deed(s) issued to date.

**Describe whether the owners and state and local agencies were notified of the use restrictions and controls affecting the property**

State environmental agencies notified of use restrictions and controls via review/approval of the Rev. 1 Final Off-Depot Groundwater Remedial Design. The Notice of Land Use Restrictions was recorded on Thursday, 11 June 2009, in the Register of Deeds, Shelby County, TN; Document No. 09069308.

**Certification Statement**

*I, the undersigned, do document that the inspection was performed as indicated above, and that the above information is true and correct to the best of my knowledge, information, and belief.*

Date: 30 June 2021  
Name/Title: Thomas Holmes/Project Manager  
Organization: HDR Inc.  
Signature:

Completed annual inspection forms shall be sent within thirty (30) days of the inspection to:

HQ Department of the Army  
Assistant Chief of Staff for Installation Management  
Attn: BRAC Division (DAIM-ODB) (James C. Foster, PM)  
2530 Crystal Drive (Taylor Bldg), Room 5000  
Arlington, VA 22202-3940

U. S. Environmental Protection Agency, Region 4  
David Keefer, Chief  
Restoration & Sustainability Branch, Superfund Division  
61 Forsyth Street, SW  
Atlanta, GA 30303

Tennessee Department of Environment and Conservation  
Division of Remediation  
Memphis Field Office  
Attn: Jordan English  
8383 Wolf Lake Drive  
Bartlett, TN 38133-4199

**Table 1**

**Summary of Land Use Controls and Monitoring Requirements  
From Dunn Field Land Use Control Implementation Plan**



TABLE 1  
SUMMARY OF LAND USE CONTROLS AND MONITORING REQUIREMENTS  
ANNUAL SITE INSPECTION REPORT  
Dunn Field - Defense Depot Memphis, Tennessee

Type of control	Purposes of control	Duration	Implementation	Monitoring frequency/responsibility <sup>1</sup>	Affected area
1. Deed and/or Lease Restrictions A. Land use B. Groundwater	A. Prevent residential use or other child-occupied facilities (including daycare) B. Prevent production/ consumptive use of groundwater or drilling of groundwater wells.	Until the concentration of hazardous substances in the soil and the groundwater have been reduced to levels that allow for unlimited exposure and unrestricted use.	Drafted by Army property disposal agent  Deed recorded at the Shelby County Register of Deeds office.	A. Site Inspection/ LUC verification – Every 5 years as part of the required remedy review under CERCLA. The Army will verify information properly recorded at Shelby County Register of Deeds office(s).  B. Groundwater well verification – No less than annually the DLA or the Army (or its authorized representative) will conduct field inspection to ensure no production/consumptive use well(s) have been installed.	A. The Disposal Area/western portion of Dunn Field.  B. The Disposal Area/western portion and the northern portion of the Northeast Open Area of Dunn Field.
2. Notice of Land Use Restriction A. Land Use B. Groundwater	A. Prevent residential use or other child-occupied facilities (including daycare) B. Prevent production/ consumptive uses of groundwater or drilling of groundwater wells.	Until the concentration of hazardous substances in the soil and the groundwater have been reduced to levels that allow for unlimited exposure and unrestricted use.	Drafted by Army property disposal agent in accordance with Tennessee law and recorded at the Shelby County Register of Deeds office.	A. Site Inspection/ LUC verification – Every 5 years as part of the required remedy review under CERCLA. The Army will verify information properly recorded at Shelby County Register of Deeds office(s).  B. Groundwater well verification – No less than annually the DLA or the Army (or its authorized representative) will conduct field inspection to ensure no production/consumptive use well(s) have been installed.	A. The Disposal Area/western portion of Dunn Field  B. The Disposal Area/western portion and the northern portion of the Northeast Open Area of Dunn Field.
3. Zoning Restrictions	Allow only certain uses of the property per designation as Light Industrial zoning district. Not effective at preventing child-occupied uses including daycare, nursery school or schools K through 12.	Until zoning district designation changes.	Zoning districts designated by City of Memphis and Shelby County LUC Board.	Site Inspection/ LUC verification – Every 5 years as part of the required remedy review under CERCLA. The Army will verify with the City of Memphis and Shelby County the current zoning designation.	All of the Dunn Field property (except the northeast area which has been sold to a private owner).

TABLE 1  
SUMMARY OF LAND USE CONTROLS AND MONITORING REQUIREMENTS  
ANNUAL SITE INSPECTION REPORT  
Dunn Field - Defense Depot Memphis, Tennessee

Type of control	Purposes of control	Duration	Implementation	Monitoring frequency/responsibility <sup>1</sup>	Affected area
4. Groundwater Well Restrictions	Prohibit installation of drinking water well within half-mile of the site and the offsite contaminated groundwater.	Until the site is no longer a Federal Superfund site, or MSCHD determines that the drilling of a well does not pose a threat to a local aquifer.	Groundwater Well Construction Code administered by MSCHD, Water Quality Branch.	Site Inspection/ LUC verification – Every 5 years as part of the required remedy review under CERCLA. The Army will verify with the MSCHD on the implementation of its regulation.  Groundwater well verification – No less than annually the DLA or the Army (or its authorized representative) will conduct field inspection to ensure no production/consumptive use well(s) have been installed.	A. The Disposal Area/western portion and the northern portion of the Northeast Open Area of Dunn Field.
5. Fencing	Restrict public access to prevent unauthorized uses while the site is not regularly occupied.	Until transfer and the site is occupied on a regular basis, pending approval by the Army, EPA and TDEC.	Erected by the Army and is maintained by DLA prior to transfer.	Site Inspection/ LUC verification – Every 5 years as part of the required remedy review under CERCLA. The Army will verify that the fencing while present is in place and is being maintained.	All of the Dunn Field property (except the northeast area, which has been sold to a private owner).
6. Protocol	Restriction of groundwater use and denial of installation of groundwater wells within the site.	The Protocol will terminate and be superseded by the deed restriction upon property transference.	90 days after approval of the LUCIP.	Protocol will be provided to all personnel that are assigned to work on Dunn Field.	All of the Dunn Field property (except the northeast area, which has been sold to a private owner).

**Notes**

<sup>1</sup> Prior to transfer of any Memphis Depot property, the DLA or the Army (or its representatives) will perform the monitoring. After transfer, the Army may arrange to have TDEC, the City of Memphis, or some independent third party representative conduct any required monitoring. [See Section 5 below].

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

LUC = Land Use Control

DLA = Defense Logistics Agency

MSCHD = Memphis Shelby County Division of Health Services

EPA = US Environmental Protection Agency, Region 4

TDEC = Tennessee Department of Environment and Conservation

**Source:** Defense Distribution Center (Memphis) Dunn Field Land Use Control Implementation Plan (LUCIP). CH2MHILL, 2006.

**Figures 1 and 2**

**Land Use and Groundwater Use Restrictions  
From Dunn Field Land Use Control Implementation Plan**





Source: Figure 1 Dunn Field Land Use Restrictions from Defense Distribution Center (Memphis )Dunn Field Land Use Control Implementation Plan (LUCIP), Revision 2 (CH2MHILL, 2008)

**Figure 1**

## Land Use Restrictions Map

Annual Site Inspection Report

Dunn Field  
Defense Depot  
Memphis, Tennessee

## Legend

■ ■ ■ Dunn Field Boundary

Land Use Control Boundary  
(No residential development or child daycare uses.)

Note:  
A perimeter fence is maintained on the Land Use Control Boundary.



0 250 500  
Feet

Projection: NAD 1927 StatePlane Tennessee  
Units: Feet, Elevation Units: Feet, NAVD88

Date: 6/4/2020  
Edition: Rev 0





**Figure 2**

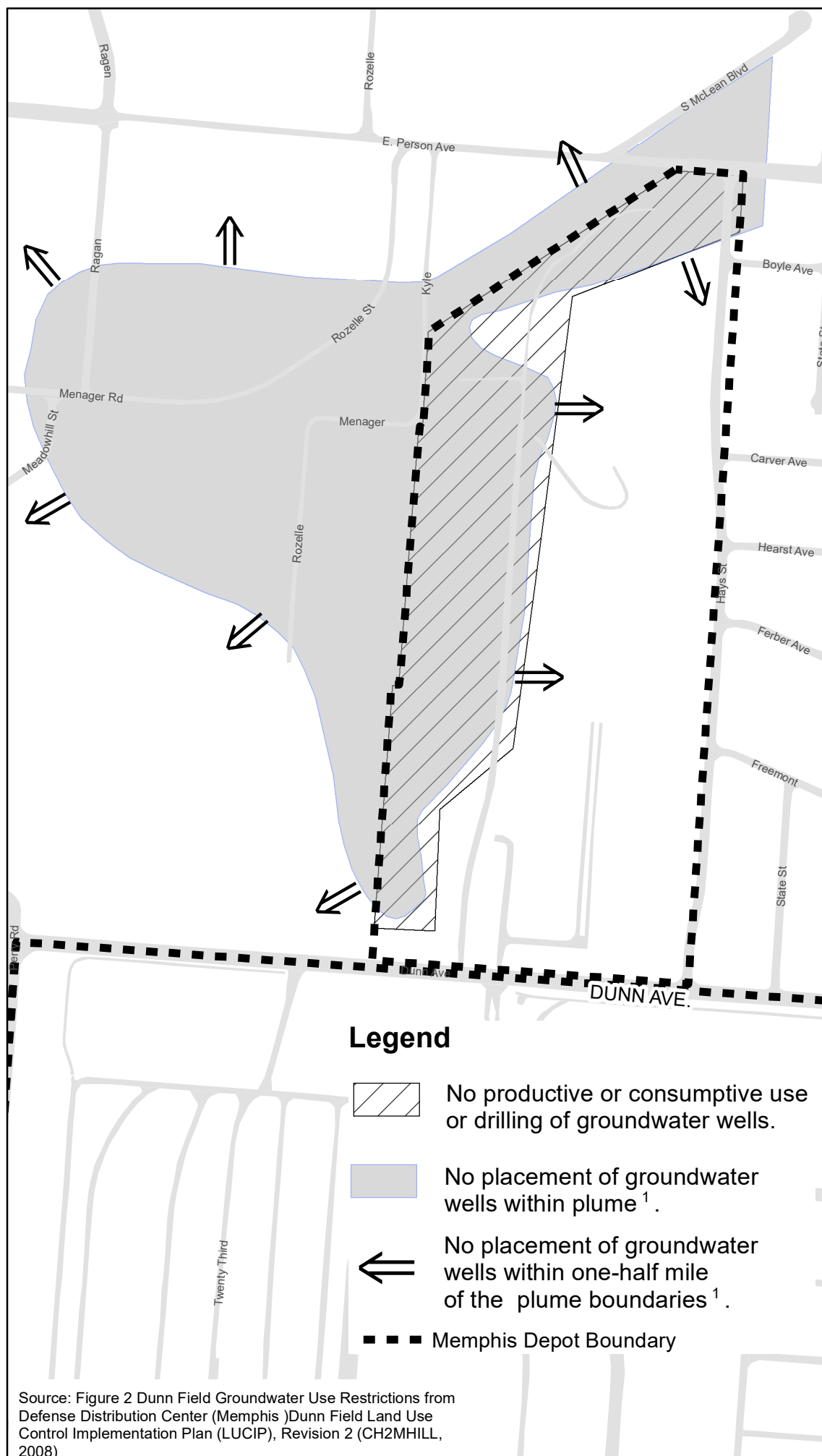
# Groundwater Restrictions Map

Annual Site Inspection Report

Dunn Field  
Defense Depot  
Memphis, Tennessee

Note:

1. Per Shelby County  
*Rules and Regulations  
of Wells.*



Source: Figure 2 Dunn Field Groundwater Use Restrictions from Defense Distribution Center (Memphis )Dunn Field Land Use Control Implementation Plan (LUCIP), Revision 2 (CH2MHILL, 2008)



0 400 800  
Feet

Projection: NAD 1927 StatePlane Tennessee  
Units: Feet, Elevation Units: Feet, NAVD88

Date: 6/4/2020  
Edition: Rev 0



## **Appendix A**

### **Responses to Regulatory Agency Comments and Approval Letters**



**STATE OF TENNESSEE**  
**DEPARTMENT OF ENVIRONMENT AND CONSERVATION**  
Division of Remediation  
Memphis Environmental Field Office  
8383 Wolf Lake Drive  
Bartlett, TN 38133-4119

December 8, 2020

James C. Foster  
BRAC Program Manager  
Headquarters Department of the Army,  
Assistant Chief of Staff for  
Installation Management (DAIM-ODB)  
Army Pentagon,  
2530 Crystal Drive,  
Arlington, VA 22202-3934

**Subject: 2020 Annual Site Inspection Report**  
**Defense Depot Memphis, Tennessee**  
**TDoR ID # 79-736**  
**TN4210020570**

Mr. Foster,

TDEC-DoR has reviewed the 2020 Annual Site Inspection Report (submitted 8/20/2020), as compiled by HDR Inc., and approves of the document. If there are questions regarding the approval, please contact me at (901) 371-3041 or at [jamie.woods@tn.gov](mailto:jamie.woods@tn.gov).

Regards,

A handwritten signature in blue ink, appearing to read "J A Woods", with a long horizontal flourish extending to the right.

Jamie A. Woods, P.G.  
Project Manager  
Division of Remediation  
Memphis Environmental Field Office

cc: Joan Hutton (CALIBRE)  
T. Holmes (HDR Inc)  
D. Lloyd (EPA-PM)

TDoR NCO: file 79-736

TDoR MEFO: file 79-736





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

June 23, 2021

Mr. James Foster  
Assistant Chief of Staff for Installation Management  
Base Realignment and Closure Division (ACSIM-ODB)  
2530 Crystal Drive (Taylor Building), Room 5000  
Arlington, VA 22202-3940

Dear Mr. Foster:

The U.S. Environmental Protection Agency (EPA) has reviewed the U. S. Department of Army, Defense Depot of Memphis, Tennessee Responses to EPA Comments for the August 2020 Annual Land Use Control (LUC) Inspection Reports for the Main Installation and the Dunn Field.

The 2020 Annual Site Inspection Report referenced above is conditionally approved with the understanding that the 2021 Annual Site Inspection (SI) Report will address the issues noted below:

- EPA requests a future meeting be scheduled to discuss the efficacy of DDMT LUCs given newly collected information during the SRI.
  - There are concerns with respect to potential offsite contamination beyond property boundaries.
    - **NOTE:** CERCLA definition of a plume is not described by property boundaries but by plume definition (expand/contraction, as applicable) and contamination may affect all media and LUCs are determined based on plume/media specific contamination.
- Please provide information requested in EPA comment #4 and #5 in the upcoming 2021 Annual SI Report. Please refer to NOTE above for additional clarification.
- Please include information requested in EPA comment #6: Specifically, please address how a comprehensive effort with regard to ensuring LUCs are monitored and enforced.
  - EPA understands that Ms. Bunn doesn't oversee the golf course; however, it is important to ensure that sitewide LUCs are monitoring and enforced. In the past, this has been an issue (Barnhart-Crane), especially in conjunction with youth programs. EPA expects the U.S. Army to provide details as to the monitoring/enforcement of LUCs throughout the DDMT facility.
- Please include the information provided in U.S. Army RTCs for #7 in the upcoming 2021 Annual SI Report.

Should you have any questions or concerns, please feel free to call me at on my cell number 404-229-9500.

Sincerely,

A handwritten signature in cursive script that reads "Diedre Lloyd".

Diedre Lloyd  
Remedial Project Manager  
DOD Coordination Section  
Restoration & Sustainability Branch  
Superfund & Emergency Management Division

cc: Mr. James Foster, (Signed Original), Assistant Chief of Staff for Installation Management  
Base Realignment and Closure Division (ACSIM-ODB), 2530 Crystal Drive (Taylor Building),  
Room 5000, Arlington, VA 22202-3940  
Mr. Jamie A. Woods, PG, Tennessee, Department of Environment and Conservation, Memphis  
Environmental Field Office, 8383 Wolf Lake Drive, Bartlett, TN 38133-4119  
Ms. Joan Hutton, CALIBRE, 3898 Mountain View Road, Kennesaw, GA 30152  
Mr. Thomas Holmes, HDR Environmental, P.O. Box 728, Highlands, NC 28741

Above Letter was also emailed to list below and can be found at the e-file location noted below.

ec: [james.foster.civ@mail.mil](mailto:james.foster.civ@mail.mil); [jamie.woods@tn.gov](mailto:jamie.woods@tn.gov); [joan.hutton@calibresys.com](mailto:joan.hutton@calibresys.com);  
[thomas.holmes@hdrinc.com](mailto:thomas.holmes@hdrinc.com);

e-bbc: [Terrell.tina@epa.gov](mailto:Terrell.tina@epa.gov)

C:\DDMT\DDMT\_Annual LUC/2020

**Responses to:**  
**U.S. Environmental Protection Agency (EPA) Region 4 Comments on:**  
**2020 Main Installation and Dunn Field Annual Site Inspection Report**  
**Defense Depot Memphis, Tennessee**  
**Dated August 2020**  
**Comments Received 3 November 2020**

**EPA Comments:**

1. The previously submitted DDMT SRI reports have noted to potential for offsite plume migration to surrounding neighborhoods. This data should be captured in the 2021 SI report along with a discussion of increasing the LUC boundary for groundwater/vapor intrusion contamination when the SRI contamination delineation is completed for groundwater and vapor intrusion contaminant areas.

**Response 1:** The site inspection reports are prepared to verify that existing land use restrictions are being accomplished and LUCs remain effective, and to describe any deficiency or violation of the land use restrictions. The need for additional land use restrictions can be discussed on an upcoming Site Management Team call.

In addition, the comment appears to be based on an inaccurate reading of the referenced report. The 2020 SRI report noted groundwater flow in the Fluvial Deposits aquifer (FDAQ) is onto the MI from all sides. There is no observed plume migration off the MI in the FDAQ; however, plume migration onto the MI was noted in two areas. Flow off the MI is through the deeper Intermediate and Memphis aquifers, but that is not relevant to the LUCs. Plume migration in the FDAQ off Dunn Field to the west has been noted, but groundwater concentrations have been greatly reduced through remedial action and there are no associated LUCs.

2. Page 2, 3rd bullet: discusses the AO garden on the south end of AO property that is less than 1 acre in size used for organic gardening. However, this paragraph doesn't clearly state that this FU 6 is not within the Land Use Control boundaries. EPA acknowledges that the tables and an initial sentence allude to this information; however, EPA prefers clear language for anticipated future use by a reader from the public. Please provide language within this paragraph that clearly indicates this garden area and residential housing meet residential use criteria.

**Response 2:** The following clarification will be added to the referenced text "...; the AO property is within the area available for Unrestricted Use (Figure 1)."

3. It is noted that several statements made in the 2020 Annual Site Inspection Report for the Main Installation and Dunn Field, Revision 0, dated August 2020 (the Report) regarding visual inspections, interviews and on-line computer searches could not be verified. As such, appropriate documentation is needed as additional lines of evidence to support the statements in the text to ensure the protectiveness of the land use controls (LUCs). For example,
  - Photographs documenting the visual site inspections performed on July 6, 2020 at the Main Installation (MI) and at Dunn Field were not provided to support the statements in the text regarding the current site conditions that no deficiencies were identified;
  - Interview forms documenting the interviewer and interviewee questions and answers that were conducted in July 2020 were not provided to support the statements in the text regarding the current land use and the effectiveness of the LUCs;
  - Documentation was not presented for the Shelby County Office of Planning and Development Land Use Controls Section Website on-line computer search confirming the MI is zoned in the Industrial district, with two exceptions. The first exception is Parcels 1 and 2 are included in functional unit (FU) 6, which is zoned as residential, and the second exception is the golf course in FU2, which is zoned as recreational. Additionally, documentation of the on-line search of the Shelby County Register of Deeds (SCROD) was not provided to support the statements on whether leases and deeds for MI property include the LUC and Environmental Protection Provisions (EPP).

It is recommended the 2021 annual inspection report prepared for the MI and Dunn Field be revised to include all of the supporting documentation noted above, and any pertinent additional information needed to ensure the protectiveness of the LUCs at the MI and Dunn Field.

**Response 3:** Photographs taken during the site inspection and contact logs with the interview questions and answers will be added to the 2021 report. A figure showing Shelby County zoning for DDMT will also be included in the 2021 report.

Printing the relevant documentation from SCROD would be extensive and is not considered necessary. A link for the SCROD website is provided in the report with the instrument numbers and the dates recorded; any concerns of the reviewer can be checked by review of the website.

4. The facility locations of the property owners/tenants/managers that were interviewed in July 2020 were not depicted on a site figure. Revision of the Report should be considered to ensure the areas of the land use restrictions (Figure 1) and the areas of groundwater use restrictions (Figure 2) relative to the facility locations of the interviewees are clearly understood by the property owners; an additional figure is not considered necessary..

**Response 4:** The land use and groundwater use restrictions apply to all of the MI, except the area available for unrestricted use along the eastern boundary. The restrictions apply to all of the property held by the interviewees' companies, except that Barnhart Crane also owns the administrative building and property within the unrestricted use area. The area subject to the restrictions is clearly understood.

5. No volatile organic compound (VOC) plume map(s) were presented for the MI. As such, location of the plumes relative to the current LUC boundary at the MI is not clearly understood. Ensure the 2021 annual inspection report is prepared to address this issue.

**Response 5:** The area subject to the land use and groundwater use restrictions are not based on plume boundaries, but on property boundaries shown on Figures 1 and 2. The locations of the plumes are not required.

6. Based on the interview information, it is unclear whether an administrative LUC is needed at the MI to ensure the property management firm for the Memphis Depot Industrial Park is notified if any tenants will be conducting summer youth work programs. For example the report states Ms. Anita Bunn of Colliers International, the property management firm for the Memphis Depot Industrial Park stated in the interview she was unaware of any tenants conducting summer youth work programs in 2020. However, according to an interview with Mr. Leonard Perkins, the VVA housed after-school and summer youth golf programs for children aged 7 to 18 from February 2020 to early July 2020. Although the youth golf program would be considered a recreational activity consistent with the land use, it is not clear if the property management firm was notified. The 2021 annual site inspection report should be prepared to address this issue to ensure protectiveness of the LUCs at the MI along with a discussion/consideration of adding an administrative LUC to ensure appropriate land use.

**Response 6:** Ms. Bunn is the property manager for the Memphis Depot Industrial Park, which does not include the golf course. The golf course is owned by the City of Memphis and managed by the VVA, and thus does not report its activities to Ms. Bunn. Ms. Bunn will be contacted to remind her of the restrictions on activities involving minors and the need to monitor tenants.

7. It is not clear if the Memphis/Shelby County Health Department Pollution Control Division, Water Quality Branch, who is responsible for approval of groundwater well construction under the permit process, is also responsible for ensuring un-permitted wells are not installed within the plume locations outside of the MI boundaries and Dunn Field plume boundaries. For example, Figure 2, Groundwater Restrictions Map, for the MI and Figure 2, Groundwater Restrictions Map, for Dunn Field both depict arrows around the MI boundary and the groundwater plume at Dunn Field, respectively. The figure legend indicates the arrows point to areas restricting the placement of groundwater wells within a half-mile of the MI boundary and plume boundaries at Dunn Field. As such, it is not clear what organization is responsible for ensuring no unacceptable exposure

occurs in plume areas located off-site. The 2021 annual site inspection report should be prepared to address this issue to ensure the protectiveness of the LUCs at the MI and Dunn Field off-site areas.

**Response 7:** As stated in the MI LUCIP, the SCHD Water Quality Branch is responsible for administering and enforcing the Rules and Regulations of Wells in Shelby County which include a prohibition on installation of drinking water wells within a half-mile of the designated boundaries of a listed federal Superfund site, including all areas with groundwater contamination. Installation of an un-permitted well could result in loss of the driller's license to operate in Tennessee, which is the means by which the Water Quality Branch ensures un-permitted wells are not installed.